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ABSTRACT

This study was conducted to gather data on apprenticeship programs in Illinois, with emphasis on the role of vocational education in the present system, and to recommend an alternative policy for the involvement of vocational education with apprenticeship programs. Study constraints included the fact that information was unavailable on programs not registered with the Bureau of Apprenticeship and Training (BAT), U.S. Department of Labor, or from former apprentices. Data from BAT records and from surveys of employers, labor unions, and present participants in apprenticeship programs were supplemented by interviews with educators. According to the authors, the study suggests that vocational education should act in partnership with others involved in preparing apprentices; however, as employers and unions indicate satisfaction with the existing system, educators should not insist upon the formation of a state apprenticeship council through BAT. Instead, the alternative of regional apprenticeship advisory boards is proposed. The report describes how these regional boards might be organized. (MF)

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STUDY

OF

VOCATIONAL EDUCATION

INVOLVEMENT

WITH

APPRENTICESHIP PROGRAMS

IN

ILLINOIS

-- EXECUTIVE SUMMARY --

prepared for

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INTRODUCTION

This study began with two objectives in mind: (1) to design and conduct an appraisal of apprenticeship programs in Illinois, with special emphasis on the role of vocational education in the present system; and (2) to provide recommendations and alternatives for building a policy framework to guide vocational education involvement with apprenticeship programs in the future. These objectives require going beyond the traditional view that vocational education and apprenticeship are competing sources of training and access to employment in craft occupations and trades. This study attempts to take a fresh view of these two systems as complementary, working cooperatively in building a framework to guide vocational education's role in the apprenticeship programs of Illinois.

Design of the Study

Four factors distinguish this study from earlier attempts to explore the relationship between apprenticeship and vocational education.

1. The attempt to place vocational education and apprenticeship into a framework for viewing them as complementary economic resources rather than as competing alternatives to training and employment in craft occupations.

2. Examination of craft occupations both inside and outside the construction trades; the high proportion of apprenticeship programs in construction trades has tended to lead many studies to overlook other craft occupations and opportunities for training and employment.

3. Inclusion of both joint and non-joint programs in the state. Joint programs are operated by employers and unions collaboratively, usually under the direction of a Joint Apprenticeship Committee (JAC); non-joint programs are directed by employers without the participation of a JAC or union.

4. Use of surveys and interviews with people involved in apprenticeship and vocational education in Illinois. Most studies are statistical analyses of survey data gathered

from people in the apprenticeship system; a few studies rely primarily on interviews or case studies of programs in particular states. This study includes both statistical analysis of survey results from program sponsors and apprentices, and qualitative analysis of extensive interviews to examine how people in apprenticeship programs and vocational education view each of these systems in Illinois.

Existing information available from the Bureau of Apprenticeship and Training (BAT) in the U.S. Department of Labor helped provide an introduction to that system and suggest strategies for conducting surveys and interviews. Program sponsors identified in the BAT records were surveyed, and respondents assisted with identification of individuals willing to be interviewed throughout Illinois. Contacts through personal interviews also facilitated distribution of surveys to apprentices. Finally, interviews with representatives of educational and governmental agencies involved in apprenticeship and vocational education activities in the state were conducted with the assistance of trained interviewers.

Constraints and Limitations of the Study

Before considering the findings of the study and recommendations for future involvement in vocational education in the apprenticeship system in Illinois, the limits and constraints of this study should be noted. Each of these is potentially a subject for further study, but they are noted here in recognition of the boundaries they establish for use and interpretation of the findings and recommendations reported here.

The first limitation involves the scarcity of information about non-registered apprenticeship and training programs operated by employers in Illinois. Little is known about their location -- a factor which prevented inclusion of such data in this study without costly canvassing of employers throughout the state. Even less is known about the types and quality of training received by people in apprenticeship programs which are not registered with the BAT. A complete picture of apprenticeship, the supply of trained people in craft occupations, distribution by craft and industry, by race and sex, however, is impossible without such information.

The second limitation concerns the need for information about the views of both completers and drop-outs from apprenticeship programs in Illinois. To gather this type of data would have tripled the cost of this study, so the sample was restricted to present participants in apprenticeship programs. Virtually nothing is known, however, about the attitudes and elements which contribute to success or failure of individuals to complete the programs from their perspectives. Only through examination of these populations in future research can many of the questions of concern to vocational educators in Illinois be understood.

The third limitation is related to the second -- namely that little or no systematic evaluation of program quality in vocational education and apprenticeship exists. The best information available about either system at present is based on the opinions of people who operate and participate in each system. Self-ratings and assessments demonstrate the satisfaction of the insiders with the systems they have created; they offer little insight, however, into the quality of training and on-the-job experience as individuals move through these systems into careers in the craft occupations.

The fourth limitation also evolves from earlier ones. Follow-up studies of apprentices and completers indicate that a substantial percentage of those trained through apprenticeship enjoy more steady employment and advance to managerial and entrepreneurial positions than others in the labor market, and that they advance more quickly and at an earlier age than other journeymen. Though there seems to be an apparent connection between apprenticeship and later success, no system of evaluation of the outcomes of apprenticeship or vocational education training exists. It is not clear what other influences contribute to the success of the person, such as personality, goals, access to opportunities, family support or discouragement, chance and the like. Only through careful assessment of long-term outcomes of various types of training can the relative contributions of apprenticeship and vocational education be assessed more accurately in terms of the success of the person on the job, at home and in the community in which he or she lives and works after leaving school to remain in full-time employment.*

*The technique of evaluation, especially outcome evaluation, is developing rapidly but should be pursued vigorously as the benefits promise to be substantial.

FINDINGS

BAT Data

BAT records show that 68% of apprentices in Illinois are in programs located in the Chicago metropolitan area (Berkeley, Des Plaines and Lansing).

There is a heavy concentration of apprenticeship in several areas:

-- Meatcutters (939), which reflects the growth of supermarkets throughout the state.

-- Construction trades (9,166) which accounts for 62% of apprentices in Illinois, broken down as follows:

Structural Steel Workers	384
Ornamental Iron Workers	107
Painters (Construction)	405
Cement Masons	239
Carpenters	2,129
Bricklayers	456
Pipefitters	656
Plumbers	860
Roofers	1,833
Insulation Workers	196
Lathers	8
Plasterers	33
Operating Engineers	830
Floor Layers	3
Glaziers	17
Sheetmetal Workers	763
Linemen, Light and Power	26

The race and sex composition of apprentices in Illinois is roughly equivalent to the nationwide composition; as is the case for the U.S., there are few women in apprenticeship in Illinois. There is a large variation in race composition by craft, suggesting that some programs have been less aggressive than others in recruiting minorities for apprenticeship, or access is more difficult; no programs have more than a few women. In personal interviews conducted with 124 individuals, and in the program sponsor survey, virtually no program sponsor acknowledged that recruitment of minorities was a problem for his program. The EEOC data imply otherwise.

The available BAT records show an attrition of 942 apprentices in 1975, or 5.3%. This reduction in the number of apprentices may have been the result of the business recession of that year and, if so, it reinforces the point that the hiring of apprentices is largely based on immediate needs rather than on estimates of future needs for trained craftspeople.

There are several implications in these findings. First, a common data collection system and common definitions need to be developed for all agencies concerned with apprenticeship. Second, enrollment of apprentices should ideally be based on forecasts of future demand rather than on current demand for specific occupations to minimize shortages or surpluses of trained craftspeople. Third, the absence of women, and the uneven record of minorities in apprenticeship, suggests the need for strong, non-discriminatory vocational counseling as early as the primary school years and including non-discriminatory portrayal of women and minorities in crafts and other skilled occupations or vocations, and admissions policies. Finally, the untapped source of unregistered programs offers the potential for the development of new modes of classroom training.

Program Sponsors Data

There are two limitations on the program sponsor data. First, as explained earlier, training programs with large numbers of apprentices are underrepresented in the sample. Second, the results tend to be biased by the fact that program sponsors were asked to rate themselves.

Of the programs reporting, 90% start apprentices at 40% or more of the journeyman rate. Data from 1973 indicate that this apprentice rate may be equal to or lower than rates for occupations requiring comparable levels of education and training.

The gap between the apprentice wage and that of higher-wage occupations is made up by the $2 to $3 future advantage of journeymen. Apprentices confirm that future earnings are an incentive to enter apprenticeship; about one-fourth of them include "good journeyman wages and fringes" as a factor in helping them decide to enter apprenticeship.

Program sponsors rate related instruction for their programs high for job-relatedness, organization, completeness, relevance, and overall quality. This suggests that program sponsors are satisfied with the system they created. By contrast, 58% of apprentices indicated some type of problem with related instruction. This discrepancy is not surprising, in view of the fact that the apprentices, not the program sponsors, attend the classes. Similar discrepancies between students and teachers are found in other training and educational institutions, including university classes.

Apprentices reported that employers and labor organizations most frequently provided the related instruction, while program sponsors reported that employers and community colleges most frequently provided the related instruction. It is possible that apprentices confused related instruction providers with their most frequent contact points, and that this accounts for this discrepancy in results.

It is impossible to ascertain from these data how many programs do not use public educational institutions for related instruction. Personal interviews with program sponsors indicate that this number may be substantial, and that this non-use of public institutions may be the result of dissatisfaction with or lack of information about them.

To the degree that small apprenticeship programs are associated with small towns, the data show that the role of the community college is stronger in small towns than in the Chicago metropolitan area.

Program sponsors reported their highest frequency of contact with employers, and their lowest frequency of contact with Illinois vocational education and outreach agencies. A weakness in these findings is that the interpretation of "Illinois vocational education" and "outreach agencies" was left to the respondent. Low frequency of contact by sponsors with labor organizations is accounted for by the fact that relatively small non-joint programs appear to be overrepresented in the sample. Program sponsors felt that contacts with employers are most helpful and that contacts with vocational education and outreach agencies are least helpful. This may also be a matter of frequency of contact and the role of employers and vocational education.

Program sponsors gave vocational education mixed reviews in both the survey and personal interviews as to potential in improving apprenticeship programs. Fifty-one percent of all respondents felt that vocational education could be helpful; 13% responded that vocational education is a barrier to improvements. As program size increases, the "barrier to improvements" response increases.

In personal interviews, program sponsors expressed ambivalence about the role of vocational education in preparing young people for apprenticeship. On the one hand, most responded that vocational education is not useful or necessary in preparing a young person. On the other hand, these same individuals also said that vocational education helps facilitate apprentices' progress through training programs.

There was general agreement among program sponsors that young people are poorly prepared in mathematics and communications skills.

As was observed earlier, program sponsors who were personally interviewed and sponsors who responded to the survey failed to recognize the decidedly mixed apprenticeship record with regard to minority participation; in the surveys only four percent indicated that access to apprenticeship is a problem for minorities. A somewhat higher percentage, 8.7%, said that access by women is a serious problem. These responses may be accounted for by the absence of good data widely

published about participation of women and minorities in various apprenticeship programs, and in part to attempts to "solve" the problem by ignoring it in hopes that it will disappear.

Twenty-five percent of program sponsors responding favor the establishment of a state apprenticeship council and 31% oppose it; the remainder expressed no strong opinion. Respondents explained their reactions to the proposal to establish a council in the following ways:

-- Sponsors who favored the council gave reasons which suggested the need for general improvement of the apprenticeship system.

-- Those opposing the council suggested that things are fine as they are and that there is no need for change.

-- Those who said they were indifferent tended to lean against the council idea, using such phrases as: "our program is all right," "we don't need another bureaucracy," "it wouldn't work."

-- Reasons for support:

  - Standardization, to facilitate planning and coordination
  - Guidance on policy
  - Ability to attract more young people (presumably because of standardization) to enlarge the supply of craftspeople
  - Reduction of union influence
  - Strengthening the support of educators, presumably through increased promotion of apprenticeship that a council could offer.

-- Reasons for opposition:

  - Political involvement by council officials in programs
  - Bureaucratic red tape, duplication of services, added costs to the taxpayer
  - Imposition of services that are superfluous; current programs are perceived as successful
  - Government interference.

Apprentice Data

Ninety-one percent of apprentices surveyed have a high school diploma or have completed one or two years of college. The high percentage of high school graduates is to be expected, as a diploma is a requirement for most apprenticeship programs.

Fourteen percent of white apprentices and 38% of black apprentices are over 30.

Eighty-one percent of apprentices rate themselves as happy with apprenticeship, of which 25% are very happy. This is extraordinarily high, and suggests that apprentices are realizing their expectations. It may also suggest that the screening process for apprentices is well suited to producing satisfied workers.

There tends to be a longer waiting period from application to enrollment for blacks than for whites. Thirty-three percent of whites had to wait over six months, compared with 52% of blacks. In the absence of more data, no conclusion can be drawn with regard to this difference in waiting period.

Most apprentices learned about apprenticeship from family (29%), friends (30%) or at work (16%). Blacks tended to rely slightly more on the formal structure than on family or friends, probably reflecting the fact that blacks' families and friends are less likely to be apprentice-trained or -connected than are whites' families and friends. High school and college counselors and teachers played a minor role for both blacks and whites.

Most apprentices feel that the information they received about apprenticeship prior to applying was helpful, although 20% indicated that they would have liked to know more. Program sponsors, educators and community leaders who were personally interviewed believed that the information supplied young people about

apprenticeship is inadequate. The discrepancy between the opinions of apprentices and non-apprentices is accounted for by the fact that apprentices surveyed were successes, whereas people who were interviewed considered all young people who might be candidates.

Blacks and whites were attracted to apprenticeship by the same factors: working with their hands, good journeyman wages, earning while learning, and encouragement by family and friends.

Forty-eight percent of apprentices felt that mathematics was helpful in preparing them for apprenticeship, followed by 43% who felt that vocational training courses were helpful. The apprentice data confirms the personal interview data that both basic and vocational education is important in the secondary-level preparation of apprentices. Fifty-six percent wished they had taken vocational education courses, and 22% mathematics.

Forty-two percent of apprentices felt that they had no problems with related instruction. For the remaining 58%, the most common problems were distance to the location of related course instruction (12%), and applying what is learned in class to work on the job (17%). For those who have trouble applying what is learned to work on the job, it is difficult to ascertain whether the trouble is due to poor instruction or to general dislike of the classroom.

Educator Data

The source of data on educators is 41 personal interviews conducted in the spring of 1976. Almost all were community college administrators; only community colleges with related instruction programs were contacted. Six educators were associated with secondary schools or with the Washburne Trade School. No administrators of area vocational centers were interviewed.

-- Fifteen educators expressed the view that vocational secondary school counseling in apprenticeship is poor and needs improvement.

-- Eleven felt that vocational education at the secondary level is not useful or necessary in preparing young people for apprenticeship; 20, however, believe that a vocational education background facilitates an apprentice's progress through training.

-- Eighteen felt that young people are poorly prepared in reading and communications skills, while 24 felt that high school graduates are lacking in mathematics skills.*

-- Twenty believed that the schools ought to have or assume a greater role in providing information about apprenticeship.

-- Eleven mentioned developing improved relationships with unions.**

There do not seem to be uniform standards for classroom instructor qualifications. Some administrators said they hire journeymen; others look for teachers with craft experience, while others attempt to find individuals who are both journeymen and certified teachers.

*This is not a particularly new insight: it is shared by European and Russian educators and American employers over the last two centuries. Many people seem chronically displeased with the education of the young. In the words of an employer surveyed in southwestern Illinois during the spring of 1976: "Our schools are not doing the job in basic reading, spelling, math or the use of proper English.... The student is not prepared for higher learning and is involved in high school courses that have no meaning in preparing a student for the job market. Standards are being lowered in all school levels." (Rodgers, Educational Planning in the Labor Market, Vol. 1. Evanston, Ill;: Northwestern University, 1976, p. 154.)

**Educators' responses are based heavily upon "know-how" and experience expressed as feelings and opinion. No educator respondent cited solid evidence or research to support opinion. "Know-how" is exceedingly valuable and should in no way be denigrated; however, the role of such persons might be enhanced and their views given more weight if they were supplemented by research, even of a limited nature.

Thirty educators felt that budget and reimbursement is a problem for programs in their institutions. Some complained about less than full reimbursement by the state, while others believe that vocational education in general is underfunded. Not surprisingly, the individuals associated with the Washburne Trade School were angry about the non-reimbursement of related instruction in that institution.

The most frequently mentioned recommendation by educational administrators to establish or expand a working relationship with apprenticeship programs was "cooperation between individual institutions, industry and labor." Administrators whose institutions provided related instruction for large numbers of apprentices observed that this cooperation was instrumental to the success of their programs, implying that program sponsors' utilization of public institutions was the result of mutual efforts by the educators and the sponsors.

Data on Equal Opportunity in Apprenticeship

Survey data showed the following:

-- Equal opportunity is not regarded as a serious problem to most persons already in the apprentice system, whether the apprentice, the union, the employer, or a sponsor.

-- The percentage of minority apprentices in all craft categories is approximately equal to minority representation in the population of the State of Illinois. Minority representatives are underrepresented in such crafts as plumber electricians, tool and die makers, draftsmen, and electronics technicians, and somewhat overrepresented among cooks and bakers and in the so-called "trowel trades" including common labor.

-- The overall record of employing minorities in apprenticeship (11.3%) in Illinois is somewhat better than that of the United States (8.8%).

-- The Illinois record on employing women (0.3%) is not as good as that of the United States (1.1%).

Compliance review requires reliable and complete data about apprenticeship. It seems reasonable to expect that the Bureau of Apprenticeship and Training and both the federal and state fair employment practices agencies include regular review and reporting procedures on the entrance of minorities and women into apprenticeship by craft and by state. It is important to keep in mind that BAT reports only on registered programs. There are, however, numbers of unregistered programs in the state which neither they nor anyone else knows much about and these should be monitored by the state FEPC. The complexity of data gathering, resistance to it and cost are not to be underestimated. Nevertheless, this should not be reason to ignore the problem.

No state organizational rearrangement or expression of good intentions can improve performance in this area without the systematic and regular reporting of efforts to increase the numbers of minorities and women recruited, counseled and provided pre-apprenticeship training, the numbers admitted into apprenticeship, drop-outs, completers and affirmative actions taken to increase success of the program in the State of Illinois.

Of equal importance is enlargement of the economic base of the State of Illinois as the basic means to increase employment opportunities. This means a full employment policy insofar as the State of Illinois can contribute to it. This implies statewide and regional public construction planning and expenditures to increase such activity as construction and building declines in the private sector and vice versa.

RECOMMENDATIONS

This study began with the issue of a State Apprenticeship Council for Illinois among the alternatives to be explored.

The findings of this study show substantial satisfaction among employers and unions with the apprenticeship system as it exists. The study suggests that educators should shape the role of vocational education in apprenticeship as a partner with others involved in the common enterprise of preparing apprentices for the crafts and facilitating efficient operation of labor markets throughout the state. Training and education are critically necessary economic resources to aid communities and regions in strengthening their own employment base as well as that of Illinois.

Recommendations presented in this report derive from the view that both apprenticeship and vocational education will benefit from the opportunity to complement each other's roles where both are promoting economic growth rather than presiding over shrinking employment and apprenticeships in an atmosphere of retrenchment and scarcity.

It seems clear that unless and until employers and unions who are directly involved in the apprenticeship system request formation of a State Apprenticeship Council through the BAT and the State Department of Labor, pursuit of that objective by educators is likely to constitute a barrier to growth of productive relationships between apprenticeship and vocational education.

One Alternative: Regional Apprenticeship Advisory Boards

The conclusion that educators should not insist upon formation of a State Apprenticeship Council does not mean that there is no role for vocational education in that system. It does suggest, however, the need for a different type of resource which can facilitate cooperation and collaboration to the mutual benefit

of people and institutions in both vocational education and apprenticeship programs in the state. We shall refer to an alternative resource to be recommended here as Regional Apprenticeship Advisory Boards (RAABs). The role of each regional advisory board would include six dimensions:

1. Labor market information including quantitative and qualitative information regarding the demand, pay, benefits, hours, quality of on-the-job training, management style, autonomy in the workplace, opportunity structure, physical or emotional stress, travel, time, cost, distance and other related factors about various types of employment in crafts and related occupations, to improve counseling and career decision making.

2. Coordination of these efforts with those which are concerned with manpower, employment and economic development policies in each region and for the state.

3. Facilitation of communication among the various educational and training resources able to contribute to the supply of skilled, trained workers in craft occupations in Illinois.

4. Improving use of employment and placement resources in each region.

5. Facilitation of complicance with existing fair employment and equal employment opportunity regulations of the BAT and agencies of federal and state government. The problem of compliance rests with the enforcement arm of the executive branch of the state, and with respect to review of funding and performance within the Illinois General Assembly.

6. Research and program development in the crafts and related occupations in response to employment needs and opportunities and training resources in each region of the state.

The role of the RAABs is more general than that specified by the BAT for State Apprenticeship Councils, and leaves to the BAT its present functions in the state. The SAC could not easily be adapted to the larger dimensions listed above, nor to the recommendations in this study for building a collaborative

relationship which focuses on employment opportunities in the full range of occupations dependent on crafts and trades. The RAABs would link the crafts and vocational education to other economic and educational interests in each region of the state to improve total advantage to apprentices and people in related careers. As noted earlier, the goal is to enlarge the pie rather than to devise ways to slice a shrinking pie. SACs and the BAT tend to focus on the mechanics of managing and monitoring the apprenticeship share of the employment picture. The regional advisory boards, however, would attempt to build on the complementary roles of apprenticeship and vocational education as economic resources for the mutual benefit of all people throughout the regions of the state.

Objectives of the Regional Apprenticeship Advisory Boards

The objectives of regional advisory boards focus on preserving and legitimizing the complementary roles of people and institutions in the pluralistic educational and training system of Illinois. Secondary schools, community colleges, area vocational centers, JACs, apprenticeship program sponsors, unions and employers all contribute to the economic and employment base of a region. Perhaps as important, each performs important, mutually supportive activities which are related to both changes in people and changes in labor markets. These dynamics require adaptation of each of these institutions and educational programs to changing career goals and values of people at various stages in their lives as labor markets are changing.

The regional council is, therefore, a means to achieve an effective response to these needs and opportunities. In general terms, they could be envisioned to operate as follows:

1. Develop training programs which preserve the employment mobility of the individual, including access to jobs and career opportunities in the crafts and related occupations, aiding the individual to realize his or her job and income expectations, helping people adapt to changes in technology

which affect the character of work and skills required to perform adequately on the job, and facilitating career changes as shifts occur in:

a. the health and physical strength of the individual

b. the personal interests and aspirations of the person

c. the skills needed in the society.

2. Improve training to prepare "well-rounded craftspeople" who can maintain their positions in craft occupations over time. Employment mobility and security are dependent on sound initial training in basic learning skills and in the requirements of the craft occupations. This objective requires that employers, unions, JACs and others in the apprenticeship system are contributing partners in helping educators understand these conditions and requisites of success in the craft occupations and trades.

3. Introduce apprentices to knowledge and understanding of related occupations which reach beyond specific jobs in the crafts. Vocational education can provide information which enables apprentices to make better informed decisions about additional training and opportunities in related occupations as their personal interests, physical attributes and skills change in later life.

4. Improve opportunities for continued learning to preserve adaptability and prevent obsolescence for people in the crafts and related occupations. This is especially of concern to community colleges; their contribution to the apprenticeship system extends beyond initial training to include responsiveness to the needs and interests of journeymen who wish to extend their training and employment into wider career opportunities such as entrepreneurship, design, architecture, construction and trades management, coordination, finance and accounting.*

*Sometimes overlooked is the change in skill and knowledge which is required to make the transition from craftsman to entrepreneur or contractor, e.g., from highly skilled carpenter or cabinetmaker to finance and management, for many a quantum change.

5. Improve labor market information and the efficient allocation and utilization of the labor force in Illinois and its regions. Both vocational education and the apprenticeship system can contribute as labor market intermediaries to a continuing flow of labor market information to aid the plans of people, schools, states, regions, cities, intermediaries such as teachers, parents and counselors, and employers and unions. Cost-conscious employers assume training costs only as necessary. They train apprentices as current business cycles warrant, but longer-term planning and training may be especially important to improving the employment base by attracting new jobs and industry to the regions of the state. Regional advisory boards can facilitate long-term planning and training to stimulate economic development.

6. Bring these elements together to focus on the role of apprenticeship and vocational education as complementary economic resources in the development of the state and its communities. The goals of the RAABs are built around human resources and the education and training institutions as economic resources of each community and region in the state. RAABs should work to improve the economic climate and development of the state, stimulate increases in personal income, and reduce the costs of unemployment to individuals, employers and communities. The loss or gain of jobs and the stability of the employment base in the state depend on an aggressive, collaborative posture linking vocational education and apprenticeship in a mutually supportive system benefitting employers, unions, schools and people throughout the state.

Strategies for Organizing Regional Advisory Boards

The state role should be to help identify the geographic and population centers of potential regions, and to provide incentives, encouragement and support which will contribute to a climate conducive to organizations coming together to collaborate in the organization and operation of a regional board. This process is dependent upon the larger task of linking vocational education to all types of occupations and employment opportunities throughout the state. The apprenticeship

advisory boards would, therefore, be one element of a network of representatives from schools, employers, unions and community organizations. RAABs would focus their attention on apprenticeship and training in the craft occupations and trades, with similar, parallel advisory boards focusing on additional training issues for other occupational classifications in each region.

An initial step in developing regional advisory boards for apprenticeship might be to identify potential regional members with the help of advisors from various departments of government familiar with local leaders throughout the state. The governor could appoint temporary council chairmen and representatives from labor, vocational education, higher education, unions and employers from private enterprise and government based on nominating lists developed with the assistance of people in the appropriate state agencies: the Office of Education through the Department of Adult Vocational and Technical Education, the State Department of Labor through the BAT and the Bureau of Employment Security, the Department of Local Government Affairs, the Governor's Office of Manpower and Human Development, and the Department of Business and Economic Development. Permanent leadership within each region should emerge locally from this initially appointed group.*

State support would be evidenced by the allocation of funds to establish two to four pilot advisory boards. Support for such councils is likedly to be enhanced if funding comes from several sources, and from public and private facilities and resources outside state government, and later is matched at the regional level.

The Department should serve as a communication link between regional councils, and assume leadership in securing funding and policy-level support to help organize the network of regional councils. The success of each council will

*A somewhat similar machinery was devised in the Comprehensive Employment and Training Act (CETA) to organize prime sponsors and consortiums, and could be adapted to the RAAB.

depend not only upon who is involved within each region and their ability to represent employers, unions, communities and schools, but also upon their willingness to mobilize resources needed to provide clerical and organizational support including the willingness of various regional organizations to lend facilities and staff to perform the essential tasks of the RAABs.

Recommendations for Operating Regional Advisory Boards

1. Improve career guidance and occupational choice counseling about crafts and related occupations by increasing the knowledge and sophistication of teachers, administrators, parents and students as they formulate attitudes and make decisions about work, jobs and careers. Provide communications about the qualitative aspects of work which are essential. Some of this can be provided only by people involved in these occupations directly. Some can be communicated through radio, TV, films, and the like. One major immediate task is to end unconscious stereotyping of careers according to sex by counselors. Even preceding guidance is "career awareness," which should develop an appreciation of the meaning of work in the lives of people, its opportunities and its contribution, what it means to be ready for work, how to qualify, find, enter and succeed in different types of employment.

2. Improve basic education preceding apprenticeship. Among the most pressing tasks facing all educators is the demand by employers, unions and others in private sector labor markets that young people have the basic learning skills (quantitative, reasoning, communications) necessary to succeed in apprenticeship and on-the-job training. An assumption underlying "career awareness" is that the teacher is a labor market intermediary as well as an instructor and should be in a position to help the student bridge the informational gap between school and work. Teachers therefore need access to knowledge of acquaintance of the work environment and the requirements attendant on success in the crafts and related occupations. The RAABs should provide the link between education and apprenticeship to help meet this need. Apprentices and craftsmen are, therefore, a critical resource in bringing to the classroom solid meaning to careers and occupational choice, to understanding the importance of basic learning skills for success in the various crafts and vocations.

3, Improve related apprenticeship training. Satisfaction expressed with the training component of apprenticeship programs is based on the feelings of persons directly involved, but these do not necessarily represent the needs and interests of the larger community. Curriculum should be evaluated as to whether it is an educational building block for adaptation to change and accommodation to multiple careers including apprenticeship.

4. Link educational and training resources with employment processes in regard to apprenticeship. RAABs should have a primary role in linking apprenticeship interests with educational and economic planning through involvement of employers, unions, JACs, the BAT, Apprentice Information Service activities of the Employment Service (AIS/ES) and educators.

These elements should improve the ability of educational and apprenticeship organizations to provide timely occupational and vocational guidance appropriate to the needs and interests of the person at all stages of life, especially through linking educational and training resources to the person's needs and to job opportunities in the labor market. Each of these factors contributes to the goal of achieving efficient utilization of educational resources in providing apprenticeship and vocational education training throughout the state.

5. Facilitate efficient use of labor market information for personal, educational and community planning. Vocational education's role through the medium of RAABs should apply labor market information to development of curriculum, vocational planning of individuals, efficient design and use of facilities, and training teachers and other labor market intermediaries to reduce bias in communicating information about crafts and apprenticeship in comparison with occupations typically requiring college.

6. State-level action to support regional economic employment and educational development. Vocational educators can benefit significantly by mobilizing state-wide public and private organizations to assist employers, unions, educators, employment and training resources and others concerned with vocational and apprenticeship training in the various regions through cooperation and collaboration at the state level.

The Advisory Council for Adult, Vocational and Technical Education should consider assuming leadership in encouraging the development of mutually beneficial incentives to encourage a climate in which regional coordination and planning will develop. The council can mobilize public support of education and training as an economic necessity rather than as just a cost. It can encourage planning and linkage at the regional level to provide a basis for attracting employment opportunities to the state. It can encourage the allocation of federal and state resources to help achieve regional and state economic and employment goals, including enlargement of demand for crafts, in related occupations, and apprenticeship programs. Support at the state level should also include mobilization of resources to conduct research which contributes to improvement of training processes and content.

7. The JAC and BAT roles are well regarded and perform useful functions in the apprenticeship system of Illinois. These should be integral elements of Regional Apprenticeship Advisory Boards. These mutually supportive roles can contribute significantly to manpower and economic growth needed to attract and retain both employment and people with skill and talent, but not at the expense of high-quality apprenticeship programs which already exist in the state.

Assuming a substantial contribution of professional and technical assistance from the DAVTE, and assuming prime responsibility for development and maintenance of RAABs by a region (including labor market surveys), the average first-year cost for one RAAB could be expected to approximate $41,000. It is further estimated that this cost would be expected to decline by 10% in succeeding years (see page 106 of the full report).